NEHA SUNIL

nsunil@caltech.edu | Scotts Valley, CA
Portfolio: nehasunil.com | linkedin.com/in/nehasunil

EDUCATION

MIT | 2019 –
Cambridge, MA
Incoming Graduate Student in Mechanical Engineering
- Research in Robotic Manipulation

CALTECH | 2015 – 2019
Pasadena, CA | G.P.A. 4.0
B.S. Mechanical Engineering
- Depth in Robotics

COURSEWORK

- Capstone Design Contest
- Robotics, Autonomy, Multidisciplinary Systems Engineering, Mechatronics
- Mechanics, Thermal Science, Fluid Dynamics
- Experiments & Modeling in Mechanical Engineering, Microfabrication Lab
- Biology Lab, Nanorobotics, Computation & Neural Systems, Decision Making
- Core Math, Physics, Chemistry, and CS

SKILLS

PROGRAMMING

- Python, Java, C, C++
- Mathematica, Matlab, Octave, R
- Excel (VB)
- HTML, CSS

ROBOTICS

- ROS, Simulink, OpenCV
- Raspberry Pi, Arduino

ENGINEERING

- Solidworks
- CFD, FEA: ANSYS, COMSOL

WORK EXPERIENCE

CALTECH | Electronic skin development with Daraio & Ames Labs
Student Researcher | September 2018 –
- Developing flexible force sensing array for bipedal robot

CALTECH | ME 50ab: Experiments and Modeling in Mechanical Eng.
Teaching Assistant | January 2019 –
- Finite element modeling and lab experiments with journal style reports

VERB SURGICAL | Google and J&J robotic surgery partnership
Mechanical Engineering Intern | June – September 2018
- Robotics experience in sensors and controls
- Design of optical subsystem component and test fixture

KRAENION | Startup developing applied computer vision solutions
Robotics Intern | December 2017, 2018
- 2017: Prepared forklift prototype to demo stereo vision technology
- 2018: Sensor integration for autonomous wheelchair

NIMA LABS | Portable food allergen sensor startup
Mechanical Engineering Intern | June – September 2016, 2017
- 2016: Tested multi-channel version of consumer device and isolated key variables affecting chemistry development and camera readings
- 2017: Redesigned multi-channel device from scratch, created manufacturing and assembly drawings and worked with vendors

STANFORD UNIVERSITY
Computational Genomics Intern | June – August 2014
- Created a tool in R to select RNA guides for CRISPR/Cas9 library

PROJECTS

More projects and details at **nehasunil.com**
- RC Car with Computer Vision, Ackerman Steering, Independent Suspension & Nerf Ball Shooter
- Ground Vehicle Perception using LIDAR for Subterranean DARPA Challenge
- D* Lite Path Planner for ROS Navigation Stack
- Vehicle Teleoperation with Haptic Feedback

ACHIEVEMENTS

- NSF Graduate Research Fellow
- Paul & Daisy Soros Fellowship Finalist
- Tau Beta Pi Engineering Honor Society Member
- Certified Yoga Instructor
- 2nd Degree Black Belt in Taekwondo
- Successful Aging Mini-Fellowship: Stanford School of Medicine
- Scholastic Art & Writing Award (Photography)